Unloading | Handling | Storage
What is CrossLam®?

• CrossLam® or otherwise known as Cross Laminated Timber (CLT) panels are produced from dried SPF lumber which are stacked together at right angles and glued over the entirety of their surface.

• Each CLT panel produced has between three and nine boards thick depending on the amount of structural loading required.

• Gluing at high pressure reduces the timbers expansion and shrinkage potential to a negligible level. The result is a rigid structural timber member that can be used both vertically and horizontally to construct a variety of building frames.
DELIVERY OF CROSSLAM®

Truck Load Shipments:

• CrossLam® panels are typically shipped on flat deck trucks.
• The panels need to be unloaded upon arrival at site and moved to a staging area on the ground (unless there is a prior agreement to drop the trailer at site).
• The panels will require some sorting and staging on site as the exact load order will not usually follow the exact installation order. (Unless a load plan is agreed to by Structurlam at the time of sale, see pg. 4 “Load Sequence”)
• The panels are generally strapped together in bundles that have 2 or 3 pcs stacked on top of one another. Larger panels will be loaded individually.
• These bundles or large panels are usually separated by two pieces of 1-3/8” thick dunnage on the truck for unloading with a forklift (must have long enough forks) or crane (need nylon slings and corner protection).
SIGNING FOR MATERIALS

When the Truck Arrives:

• Carefully inspect the condition and quantities of the material while still on the truck.
• If material is missing or has been damaged in transit, note the units missing, the type of damage, and the number of units involved on the drivers bill of lading or delivery receipt before you accept delivery.
• If you can learn from the driver exactly how the damage occurred, record this information as well.
• Inform Structurlam immediately of any damaged or missing material.
• Unloading typically takes 2 hours.
• When unloading takes longer you will be asked to sign an unloading overtime form.
• Extra time for unloading can and should be pre-arranged prior to arrival.
• Any fees associated with extra time are the responsibility of the customer.
SEQUENCED LOADS

(If your project was sold with the Sequenced Load option this applies to your shipment.)

Load Plans

• If agreed to by Structurlam at the time of sale, the panels will be loaded in a specific sequence as determined through the shop drawing approval process. (Load plans must be determined at the time of IFC.)

• The trailer will be loaded in a sequence typically following installation order.

• Safety concerns that arise during loading may alter the sequence.
UNLOADING

On arrival:
• If unloading with forklift or zoom-boom equipment it is necessary to have forks that are long enough to support the width of the panels. This usually means 8ft long forks are needed.
• If unloading with a crane, nylon straps and corner protection are required.
UNLOADING SAFETY

Structurlam Products understands that there are inherent risks with unloading large heavy CLT panels.

It is the responsibility of the contractor and equipment operator when unloading to take all the necessary care and precautions according to any applicable regulations when lifting panels including but not limited to:

1. Panels are to be offloaded in a restricted area. Ensure that there are no people under the loads while being lifted.
2. The unloading area is supervised by a Site Safety officer
3. The truck driver is not responsible for offloading
4. Truck drivers should remain in their cab unless panels are lifted over cab, drivers should remain in a safe location.
5. Use “Guide Line(s)” whenever possible.
FACTORY WRAP

- CrossLam® panels are typically factory wrapped in lumber paper (unless noted otherwise on the purchase agreement).
- Non-visual grade panels are typically wrapped to be covered on 5 sides with the bottom surface exposed.
- Visual grade panels are wrapped all 6 (six) sides with the bottom covered with wrap. Thin boards are strapped to the underside of the wrapped CrossLam® panels to provide forklift protection.
- Standard Dunnage is 35mm thick X 133 mm wide
- Dunnage is typically doubled up and placed under the bundles while loading the truck.
HANDLING VISUAL GRADE PANELS

Protect the Finished Sides

- Some CrossLam® panels are made to order with a visible face on one or two sides.
- Visible sides are typically finish sanded and should be protected to minimize any damage or handling marks.
- All panels will be stacked in bundles with the visible sides facing downwards to aid in easy installation, extra care need to be taken when offloading visual panels and place forks on the provided forklift protection.
- Fork protection is 42”-44” on center, 140 wide by 10mm thick, length varies.

Other Notes:
The target max weight per bundle is 10,000lbs. Offloading equipment on site needs to be able to handle loads up to or above this amount if required.
Take Care of the Panels:
Structurlam has taken every reasonable precaution to protect the CrossLam® during shipment to the project site. CrossLam® Panels are subject to surface marring and damage when not properly handled and protected.

Site Recommendations for Protection:
- Do not walk on unprotected CLT Panels or handle the material with soiled hands or equipment.
- Unload trucks and move panels by using lifting equipment. Do not drag, dump or drop panels.
- Use wide fabric or plastic belts or other slings that will not mar the wood. If chains or cables are used, provide protective blocking or padding to protect members from damage.
- Storage location should allow air movement around panels, but protect from Rain, Snow, Sun, and mechanical damage and be sufficiently elevated off the ground.
- Cover panels at all times with good quality tarps to protect them from precipitation and UV damage.
Cross Laminated Panels are susceptible to adverse weather conditions and precautions must be taken to protect them.

**Rain:**
- If unprotected, rain and moisture will cause staining of Cross Laminate Panels.
- If bolts are used with steel connections, ensure they are free of oil. Otherwise this will cause staining. Using galvanized bolts and connectors will prevent this.
- Any unprotected steel that has the opportunity to rust could also drip onto the Cross Laminate Panels and cause staining.

**Cold Weather:**
- Sudden application of heat to buildings in cold weather can rapidly change the moisture content of the Cross Laminated Panels. *This can seriously affect the structural integrity of the Cross Laminate Panels!*
- It is important that care is taken during transit, storage and throughout all stages of construction to avoid rapid changes in the moisture content of Cross Laminated Panels.
- **When applying heat to buildings, the following should be followed:**
  - Gradually increase the heat in the building over a two to three week period, up to normal temperatures. This will ensure a gradual change in the moisture content of the Cross Laminated Panels. The slower the moisture content in the wood equalizes with the moisture content in the air, the better.
  - Do not direct any forced air heating systems onto the Cross Laminated Panels.
  - Regulate all heating units remembering that hot air rises and temperatures at the ceiling can reach 38 degrees Celsius and up.
  - Maintain normal relative humidity in the building and monitor if necessary.

**Important**

It is recommended to apply the final finish to the Cross Laminate Panels before heat is applied (If applicable). This will help to regulate the change in moisture content.
WEATHER CONDITIONS

Sun Tanning

- If a portion of the panel has been left uncovered in the sun for a period of time, "sun tanning" can occur. Sun tanning is the result of exposing wood fiber to sunlight. Wood fibers will change colour when exposed to direct or indirect sunlight.
- Sun tanning can result from a tear in the wrap or from improperly covering the panel at the project site.
- Even if the materials are covered with the factory applied opaque wrap sun tanning can still result over an extended period of time. Again, it is recommended that the materials are covered with an additional opaque waterproof material (i.e. good quality tarpaulin).
- In general, all wood species change colour over time as a result of exposure to natural light and oxidation of the wood fibers. Over the long term, the colour differences will even out and in most instances will disappear altogether. If it is deemed necessary the colour difference can be corrected in the short term by manually sanding the affected areas to remove the sun tanned marks on the beam.
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